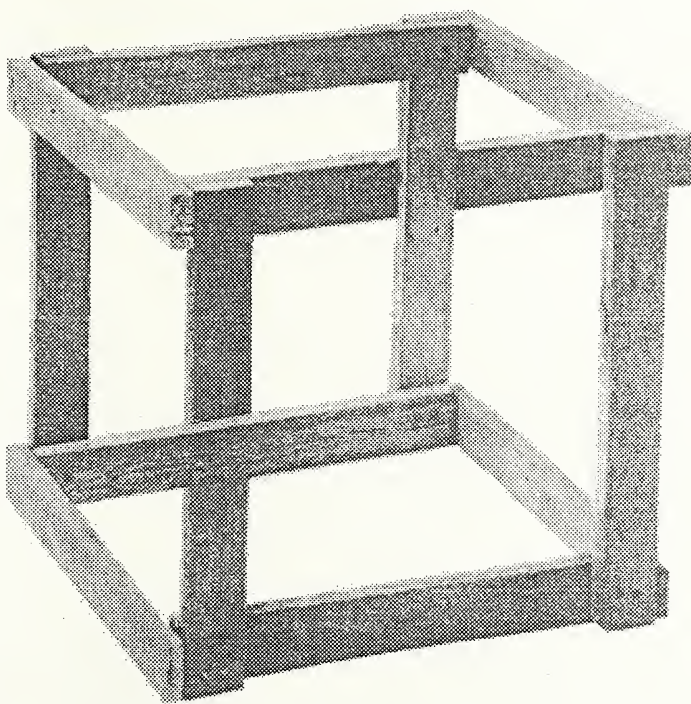



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# APEIRON

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Volume 1, April 2003





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# APEIRON

**Apeiron:** *unlimited, indefinite*

1. the arche, or principle, of all things was, according to Anaximander, the *apeiron*, the unlimited. The term is capable of various constructions, depending upon how one understands the limit. 2. [more generally] indetermination, i.e., without internal limits, and so without beginning or end... 3. an undergraduate journal of philosophy for students of all majors at Washington College.

Philosophy is one of the world's oldest disciplines. Philosophers often write on topics considered the 'specialization' of other fields. In fact, most other disciplines are historically rooted in the work of philosophy. The major founders of economic and political theory considered themselves philosophers by trade. Literary and art criticism draws heavily from the techniques of philosophers. Thus, philosophy could be considered the 'big picture' discipline.

Of course, philosophy is a discipline, and should be taken for all in all. There are noble heroes, such as Socrates or Mahatma Gandhi, and there are the infamous, like Karl Marx, Friedrich Nietzsche or Nicolo Machiavelli. Philosophy has camps viciously divided within it, as well as fashions and fads of thought. Yet, at the core, philosophy remains a healthy body of work. Critical thought is in the nature of philosophy, and there is no chance for stagnation.

Thus, without further ado, we present the new on-campus student journal **APEIRON**. The variety of topics discussed in this journal represent only a fraction of the rich dialogue that is philosophy. Nonetheless, we hope this sample will encourage and entertain.

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## Happy Hour

Jennifer Sutphin

Smoke snaked its way around the bar, not the thick overly scented smoke that spews forth from cigars and cigarettes, but a lighter, whiter vail of smoke, that smelled always of lavender. At least to me it smelled like lavender. Heaven is what you want it to be, down to every detail, even the smoke that, to me, smelled like lavender.

Happy hour had only just begun in the Heavenly Bar and Grill. I slowly turned my half empty glass around and around in my hand. The ice clinked lightly as my rotations forced it into the glass. It wasn't much to do, but it filled the time as I waited for the club sandwich I'd ordered and tried to ignore the other bar patrons. You never know who will show up here. Kierkegaard debated with himself not far from me something about the absurdity of belief. I was trying not to pay attention to him. Hume and Paley, and there's a surprise, Swinburne, had settled themselves at a booth near the pool table. I could feel another disagreement about the argument from design coming on. I could only shake my head and go back to twisting my glass around and around. Don't get me wrong. It's not that I mind sitting around with some of the great philosophers. There are times when I relish talking to them. And then there are other times, like tonight, when I'd rather have a club sandwich in peace.

I was sipping my drink placidly when Kara walked in. She, like myself, was no one special, an eternal worker bee if you will, helping with the every day running of heavenly life. She saw me and shook her head as she grabbed the chair next to mine. "He's at it again."

"Who's at what again?" I asked.

"Blase is. Going on about some wager or some such thing. Nearly trapped me in the street," she said as she took a few deep breaths.

"Pascal again?" I asked. "Someone's got to do something about him." It was not that I didn't like Blase Pascal; it's just that he had a tendency to corner me just when I wasn't in the mood to talk. "No wonder everyone's sticking clear of him in here," I said waving my hand around the room.

Kara nodded, her breathing finally settling down. "Come on...let's duck out the window in the ladies room. We'll just miss him if we go now."

"I can't. I've got a sandwich coming."

"Suit yourself then," she said before standing and slipping away into the restroom while I lounged at the bar. My club came a few minutes later, nice and fresh, the bread perfectly toasted. Then just as I was biting into it, Pascal pushed open the bar door. I could tell he was gunning for me when he walked in. He slipped over to me quickly. "Evening to you," he said. "Have you seen Kara?"

I nodded in response, "You just missed her, she's off in the bathroom."

"Have you heard my wager?" he said as he grabbed the chair next to mine. I only shook my head, hoping my indifference might cue him into the fact that I wasn't real-

ly in the mood to talk. "Let us," he began, "examine this point, and say, 'God is, or He is not.' But to which side shall we incline? Reason can decide nothing here. A game is being played at the extremity of this infinite distance where heads or tails will turn up. What will you wager?"<sup>1</sup>

"That was a lot to take in all at once, Pascal," I said, then paused, to finish my drink. It sounded an awful lot like a probability problem; well, maybe I was game for a probability problem. "Do I have to wager? It seems like the smartest thing to do is not to wager at all." I bit into my sandwich as if to punctuate my statement.

"Yes," he said, "you must wager. It is not optional."<sup>2</sup> He paused, waiting for me to answer.

"All right, so I have to wager," I said, playing along. "What if I wager too much? I wouldn't want to go broke in just one wager."

"If there are as many risks on one side as on the other, the course is to play even; and then the certainty of the stake is equal to uncertainty of the gain, so far is it from the fact that there is an infinite distance between them. And so our proposition is of infinite force, when there is the finite to stake in a game where there are equal risks of gain and loss, and the infinite to gain,"<sup>3</sup> he said. Pascal based his point on simple probability. He set up a fifty-fifty shot: either God exists, or He does not, and the chance He does exist is equal to the chance He does not exist. I thought over his proposition as I munched on my club.

Pascal was aiming for an almost win-win situation. If I were to believe in God, and God existed, then according to Pascal, I get the ultimate gain of eternal happiness. I only lose a little bit in the wager, just some temporal pleasures like being able to drink as much as I wanted to. If I were to believe in God and He doesn't exist, then I missed out on getting to run amuck. But as a believer, I had some purpose in my life. If I chose not to believe in God and God doesn't exist, then my gains and losses are small. I'd be allowed to drink, have sex, engage in all the sensory pleasures I wanted to, and I'd only lose the little bit of purpose believers have. The big loss comes in if God does exist and I don't believe in him. I lose eternal happiness, ending up, not as a heavenly paper shuffler, but as part of a kebob on the eternal deep fryer.

"All right," I said to Pascal after polishing off the last of the crust of my sandwich. "I see your point, and it's not half bad. If there's a fifty percent chance that God exists, and if by believing in Him I only lose a little but gain a big eternal reward, then why not believe in him? It makes sense, but what exactly do I have to do to believe? Just announcing I believe doesn't instantly guarantee me eternal rewards."

"At least," he said, "learn you inability to believe...Endeavor to convince yourself, not by increase of proofs of God, but by the abatement of your passions." He paused, turning a little to look me more in the eye. "Learn of those who have been bound like you, and who now stake all their possessions."<sup>4</sup>

"You mean follow other believers until I start to believe myself?"

"These are people who know the way which you would follow," Pascal paused, "and who are cured of an ill of which you would be cured."<sup>5</sup>

"Isn't it all a sham though? Playing as if I believe when I really don't?"



“Follow the way by which they began; by acting as if they believe, taking the holy water, having masses said, etc.”<sup>6</sup>

“I don’t know if I really buy it, Pascal. I mean, he’s God, he’s going to know whether or not I really believe no matter how much holy water I go through.”

Pascal sighed softly, then spoke: “What harm will befall you in taking this side? You will be faithful, honest, humble, grateful, generous, a sincere friend, truthful. Certainly you will not have those poisonous pleasures, glory, and luxury; but will you not have others?”<sup>7</sup>

“What others?” I said as I drained my second drink. In retrospect a bar might not have been the best place to have a conversation about giving up temporal pleasures.

“I will tell you,” he said, “that you will thereby gain in this life, and that, at each step you take on this road, you will see so great certainty of gain, so much nothingness in what you risk, that you will at last recognize that you have wagered for something certain and infinite.”<sup>8</sup> With that, Pascal took a step back from the bar, and then slowly moved toward the door to head out.

I shook my head as I watched him leave. Pascal was an interesting man. Setting up probability for God was something only he would do. I sat at the bar, turning my glass around in my hand again. I was deep in thought when Mark, my occasional friend and companion, walked in. “Did he talk to you? Did he talk to you yet?” he asked.

“Blase?” I said. His nod confirmed my guess. “Yeah, he just left”

“I suppose he filled you in on his wager then?” Mark asked. His voice couldn’t hide his excitement at a chance to discuss this wager. He was always one to take up Pascal’s side in a debate. They’d worked together on several heavenly mathematics problems, and Mark had developed a deep respect for the man.

“He did,” I said, biding my time.

“Well, what did you think?” he asked, pausing to order a drink. “It’s a good argument, no?”

“No,” I said, “its not a good argument, though it looks like it is the first time you hear it.”

“What do you mean?” he said. “What more could you want in justification for belief? He’s proved that you can’t lose. Even if God doesn’t exist, you still win.”

“You only win if he’s right about it being a fifty-fifty shot, and I don’t think he is.” I paused, seeing a look of consternation come over Mark’s face. “I’m not saying it’s necessarily a bad argument...it really is a good argument if you come into it from the position of someone who already believes in the Christian God. I’m just saying it has a few week points.”

“Like what? Name just one.”

“Don’t be hostile,” I said softly. “I don’t mean to bash the man, only to point out what I’d have done differently.”

“All right,” Mark said after a moment, “go ahead.”

“Well, the argument hinges on God’s existence being a fifty-fifty shot. Either He exists or He doesn’t, with the chance of His existence equal to the chance of His nonexistence. The problem is that real life doesn’t work that way. Pascal assumes only the Christian God exists, but that’s not the only God available. The religious

traditions of the world are so widely varied. That before you can earn eternal rewards for believing in a God who exists, you have to pick the right God, and follow people who believe in that God to demonstrate your belief. Having to pick the right God changes the odds Pascal's premises rest on," I said.

Mark took a moment to answer. "Well, really that objection doesn't work. The odds are still fifty-fifty that a God exists or does not exist. If you were to decide to believe the wrong God existed, you'd still get some gains. Your life would have purpose and you'd be a better person. You're entitled to the same gain if you believe in the wrong God that you'd get if God doesn't exist at all and you believed." He looked pleased with himself as he stumped me.

"Alright, fair point," I said, "Pascal's argument was good enough to anticipate that objection. If I picked the wrong God, I'd still get to have purpose in my life and I'd be a better person all around, but there are still a couple things that bother me. The biggest is that belief is necessary to get the eternal rewards."

"Well, of course belief is necessary," Mark said. "Why should God reward those who choose not to believe in him?"

"Maybe because they were good people anyway. Your actions apart from belief have to be considered before eternal rewards are guaranteed. Belief in God does give people purpose in their lives, but it's not the only thing that gives purpose. Teachers who deal with administrative suppression in public schools have purpose in their lives because they fight to inspire children. Being an inspiration is a great thing, something that should get some sort of reward, even if there's no belief in God. There are those people who exist solely to do good things for others; they shouldn't be overlooked in the heavenly equation just because they lack faith. A life spent caring for others shouldn't earn an eternity in the deep fryer just because it lacks faith." I sat back pleased with myself.

"You do have a point," Mark reluctantly admitted. "Pascal's Wager doesn't have a place for those who do good while not believing in God."

"There's really only one other thing that bothers me about the wager," I said to him.

"What's that?"

"The last part bothers me. Pascal says that when you start to believe in God, you should follow the example other faithful people set. By going to masses, and praying, and whatever else, you strengthen your faith and become closer to God."

"Yeah," Mark said. "That seems to make sense. By acting as a believer you reinforce your faith and become a better believer."

"Yes, that much I'll give you," I said, "but the type of God Pascal is pushing is supposed to be a sort of transcendent creator, who sees all and knows all. Don't you think God would know you were pretending to believe? If you die before you've reinforced your faith enough that you're a true believer, then aren't you in the same position as a nonbeliever?"

"I can see what you are getting at," Mark said, "but you've neglected something in your objection. The God Pascal is pushing, the Christian God, has always been thought of as a personal God who's interested in human affairs."

"So?" I said.



## David Hume: Inside the Idea of God

Chris Hayden

*Dialogues Concerning Natural Religion*, written by the philosopher David Hume in approximately the mid eighteenth century, is a piece of philosophical literature that will for an indefinite amount of time have a reverberating impact upon those who study it and, more indirectly, upon the world as a whole. In this work of art, Hume struggles with questions surrounding a subject that is perhaps the most mysterious and problematic of any in the history of mankind: God. To achieve his critical analysis of the questions surrounding God, Hume introduces three characters into the dialogue, each of which brings with him a unique integrated philosophical perspective regarding the existence and the nature of God. These three fictitious philosophers then critically engage one another in verbal combat, each supporting his view against the attacks of the others and each attacking the support given for the views of the others. In the fallout of this battle can be found the general principles that Hume seems to have been attempting to convey through this work. Despite Hume's presentation of these three very different perspectives regarding God, it remains, throughout the text, unclear as to whether all of these views, none of these views, or some number in between are indicative of the actual views held by Hume.

The first character to be discussed is that of Cleanthes. He holds that a God must, of necessity, exist, and offers as a proof an *a posteriori* argument by design that has as its basis the analogy between the universe and a machine. A machine, as humans know it, can be seen to have a specific and well-crafted design, set in motion to carry out a purpose by a certain creator, in this case a human. Seen analogous to this machine, in the eyes of Cleanthes, is the structure and function of the universe as a whole: "Look round the world: Contemplate the whole and every part of it: You will find it to be nothing but one great machine..."<sup>1</sup> The universe operates as if it were an infinitely complex contraption; lubed to perfection and far superior to any that could be produced by a creature as feeble as man. However, due to the resemblance between the universe and the machine, certain common properties can be inferred. One of these common properties, Cleanthes claims, is that the universe, like a machine, must have an initial creator to bring to it order and purpose and to implement and set in motion the design in order to attain a desired end. This creator is what Cleanthes refers to as God.

As a foundation for such inference, Cleanthes introduces a manner of reasoning very important not only to his arguments, but to the dialogue as a whole and to humanity as well: like causes generate like effects and like effects are generated from like causes. It is based on this principle that Cleanthes goes so far as to not only claim proof of the existence of God, but also that the nature of such a deity can be made known to us through the use of nothing more than pure reason. The machine and the universe can clearly be seen to be the two like effects. The cause of the machine, as well as the nature of this cause, is known to us through experience. It is humans. Humans possess a linear method of thinking, moving from one thought to the next,

as if gliding on a continuous curve, and never returning to the same exact state of mind twice. Humans also possess, according to Cleanthes, a structured system of moral values. Cleanthes then states that, based on the similarity of the two effects, the causes of the effects *must* resemble one another and extends to God those attributes that he observes through experience to be human: "...by this argument alone do we prove the existence of a Deity and his similarity to the human mind and intelligence."<sup>2</sup>

The conclusion he reaches is that God, like humans, must have a linear progression of thoughts and a structured system of moral values. However, he holds that these characteristics, so frail in human beings, are infinitely perfect when applied to God, and that God himself is infinitely perfect in every possible manner. At the heart of such a belief is the infinite perfection displayed by the universe when viewed in comparison to that of manmade machinery.

Cleanthes is later forced to revise his beliefs when scrutiny from the opposing two characters of the dialogue reveals several contradictions inherent in his argument. Perhaps the most powerful challenge is that if God is infinitely powerful and has the same moral values as those of human beings, then there should be no evil or suffering present in the universe. However, such is not the case, and thus a contradiction arises: "Is [God] willing to prevent evil, but not able? then he is impotent. Is he able, but not willing? then he is malevolent. Is he both able and willing? whence then is evil?"<sup>3</sup> As Cleanthes is unable to discover a remedy for such a contradiction, two somewhat altered views are proposed as possibilities. The first is that perhaps God, while immensely powerful and perfect in comparison to human beings, is still finite in his characteristics and capabilities. As a result, the universe he designed to the maximum of his capabilities necessarily possesses unavoidable negative aspects which surface to humans as evil and suffering. The second possibility is that the moral values of God in no way mirror those of humanity. Rather, God is somewhat indifferent to both good and evil, and, as a result, both are inherently present in the fabric of the cosmos: "...that [the first causes of the universe] have neither goodness nor malice."<sup>4</sup> Hume leaves it to the reader to decide whether either of these aspects resembles what truly is. It is here that the arguments generated by Cleanthes remain through the end of the dialogue.

The second character is that of the hard-nosed Demea, a dogmatist who holds that the existence of God is a necessary condition for the existence of the universe and offers *a priori* methods of proving such a belief. Forming the groundwork for Demea's belief structure is the notion of causality: all things that are must have been caused by some other things, which themselves must have been caused by yet other things and so forth: "Whatever exists must have a cause or reason of its existence, it being absolutely impossible for anything to produce itself or be the cause of its own existence."<sup>5</sup>

Demea's application of this principle to the structure of the universe allows for only two viable possibilities. The first is that there is a chain of causes and effects that stretch back *ad infinitum* for all eternity. Demea, however, rules out the possibility of such a chain being the source of all things on the basis that the chain of infinite succession of causes and effects must itself have a cause and that cause remains



unexplained by and separate from the chain. Hume writes, "...but the whole chain or succession, taken together, is not determined or caused by anything..."<sup>6</sup> The second possibility, and that which Demea contends is necessarily the truth regarding creation of all things, is there must have been an uncaused cause that holds within itself the reason for its own existence. That is, this thing must exist based solely on its nature: "We must, therefore, have recourse to a necessarily existent Being who carries the *reason* of his existence in himself..."<sup>7</sup> This uncaused cause is what Demea ardently refers to as God. Demea refuses to speculate concerning the nature of this Deity, for he feels that the human capacity of thought and reason is far too feeble to fathom the perfections of God. In no way can those attributes of a finite and imperfect being, such as a human, be extended to an infinite and perfect being, such as God. Demea's idea of God is highly reminiscent of that presented in *Meditations on First Philosophy* by Rene Descartes. It is ascertained purely from reasoning performed in the mind under the guidance of the limited human capability.

As with the view of Cleanthes, Demea's stance is critically scrutinized. Flaws are presented by each of the other characters, but perhaps the most interesting is that presented by Cleanthes. He states that if one were to show several objects to someone and explain to them the reason for being regarding each individual object, it would be quite ludicrous to then pursue the cause further and request to know the reason of being for the sum of the objects. He extends this argument to denounce the reasoning that led Demea to the conclusion that there must be a cause for an infinite chain of events, claiming that the occurrence of each individual event is sufficient to establish all those that follow and to ensure that a previous event has occurred: "...the uniting of these parts into a whole ... is performed merely by an arbitrary act of the mind, and has no influence on the nature of things."<sup>8</sup> Therefore, one need not seek a cause for the sum of the events, for the cause of each individual event is the event that immediately preceded it.

In the face of intense scrutiny from the other two characters, Demea becomes disgruntled in his dogmatism, refusing to admit the fallacies of his reasoning, and departs from the group. His beliefs are subsequently discussed very little and remain throughout the rest of the dialogue only as food for thought in the mind of the reader.

The final, and perhaps most interesting, character presented by Hume in the dialogues is Philo. Philo's role is that of the skeptic and empiricist, accepting nothing as absolute truth that cannot be vindicated through human experience. Throughout the dialogues, Philo Socratically engages the beliefs of both Cleanthes and Demea on every possible level, throwing at them obstacles which they are unable to dodge, and subsequently establishing the equality of many different belief systems regarding the origin of being.

Philo's purpose in this dialogue is primarily to do the aforementioned, that is, to show that many different belief structures are equally valid when applied to the universe, as well as to demonstrate that for any one person to take a dogmatic stance and claim his or her view as the absolute is, through the use of experience and reason, impossible. Lying at the bottom of Philo's mandate is the lack of human experience surrounding divinity of any form. Inherent in the empiricist system is the belief that

the basis for true knowledge is experience, rather than pure reason. Once again, the vast majority, and perhaps even all, of humans have no experience regarding any form of divinity. Therefore, for humans to reach conclusions regarding divinity and state them as fact is an overextension of their capabilities. These conclusions, according to Philo, are nothing more than faith claims and should be treated accordingly.

In the final section of the dialogue, Philo takes an interesting turn. It is here that Philo admits his belief in some form of divine power responsible for the creation of all things. His basis for such a belief is the experience he possesses from interacting with the world around him, and this experience is, ideally, absent of presuppositions. The general form of the belief structure that Philo embraces is very similar to the argument by design proposed by Cleanthes. However, Philo's version of this argument takes on a much weaker form. Like Cleanthes, Philo states that there seems to be many similarities between certain human creations and the universe. The human creations he is referring to are those of "our art and contrivance."<sup>9</sup> On this basis, the universe can be considered a contrivance of God, a beautiful, flowing and brilliant creation. However, the distinction made by Philo that is not made by Cleanthes is that there is also considerable difference between human creations, such as art, and the universe. As human creations and the universe are the effects and between them lurk considerable differences, it is also reasonable to assume the causes contain proportional dissimilarity. Therefore, the nature, specifically the moral nature, of God cannot, in any way, be inferred to resemble that of the human being: "...we have reason to believe that the natural attributes of the Deity have a greater resemblance to those of men than his moral have to human virtues."<sup>10</sup> This argument lies at the foundation of Philo's belief that it is impossible to know the absolute nature of the deity, because the deity's attributes are forever shrouded from the view of the human mind. It can be said with some certainty that if any one character in the dialogue that most resembles Hume in ideas and thought was to be chosen, that character would likely be Philo.

It seems that throughout the dialogue Hume attempts to present several much more general ideas regarding religion that are applicable to everyday life. The clearest of these ideas is Hume's disgust with dogmatism. How can any one man know God so well as to claim that he holds in his hands the absolute truths, which everyone seeks, without having experienced these absolute truths first hand? Hume asserts that such conclusions are impossible to reach through the use of human reason or experience. Therefore, dogmatism is nothing more than a blind faith that people are unwilling to relent, even in the face of significant and irrefutable criticism. Dogmatism is a plague that destroys the correct manner of practicing religion.

Another rather large concept introduced into the dialogues by Hume is the distinction between "true" religion and "false" religion. According to Hume, false religion is practiced by those who accept religion for its surface presentation without any form of contemplation. It is they, believing that they possess absolute truths, that become dogmatists. It is also they who preach one demeanor, yet practice another. For instance, if Christians preach love and acceptance and tolerance, then how can one explain the wars, such as the Crusades, fought against those of a different faith

without admitting that the true decorum of the practiced religion is separate from and different from that which it preaches? Hume argues that it is impossible and the wars are the result of the false practice of religion. He writes, "The steady attention alone to so important an interest as that of eternal salvation is apt to extinguish the benevolent affections, and beget a narrow, contracted selfishness."<sup>11</sup>

According to Hume, true religion is that which is contemplated and reflected upon, progressively developed throughout a lifetime, and based on experience. Consequently, each person practicing true religion will have a slightly different belief structure. Indeed, a certain degree of skepticism is necessary for the practice of true religion as it is seen through Hume's eyes, for without such skepticism from where would the necessary contemplation evolve? "To be a philosophical skeptic is, in a man of letters, the first and most essential step towards being a sound and believing Christian."<sup>12</sup> In the end, it seems true religion is that which brings inner peace to a man and inspires peace and love with all who surround him.

The final general concept proposed by Hume is the possibility that atheism and theism are merely two sides of the same coin separated only by a gap, a fissure caused solely by semantics, and this gap is yet to be bridged. "I next turn to the atheist, who, I assert, is only nominally so and can never possibly be in earnest..."<sup>13</sup> At the basis of this claim is the presupposition that all humans, regardless of theological views, must admit a first cause of order. This first cause of order to many is explicitly claimed to be God. Atheists claim, however, that the first cause was something other than a divinity. However, Hume states that whatever the atheists' claims for the first method of order, they can and should be, interpreted as an implicit recognition of some form of God. Thus, the difference between theism and atheism becomes nothing more than a perspective discrepancy.

Despite Hume's immense effort to cleanse the philosophical writing contained in *Dialogues Concerning Natural Religion* of presupposition, there is, at the core of some of the arguments, a general theme which cannot be vindicated. One such argument is that in which Hume attempts to explain the divergence of beliefs held by theists and atheists as nothing more than a matter of semantics. In this argument, Hume contends that the atheist must admit some principle of order to have entrenched itself in the fabric of the cosmos and that from that order all things came to be. This, however, is a rather large and unverifiable presupposition. Suppose for a moment that one admits not order beyond the cosmos, but rather sheer and absolute chaos. All things come to be as they are from random chance alone. The order and structure found in the universe are, therefore, only a side effect of a random collection of chance occurrences. Could Hume contend that this chaos is the ordering principle that he so avidly asserts? But how can chaos be an ordering principle? To claim such is the ultimate paradox. Chaos cannot be an ordering principle, for the very thing known as order is, by definition, excluded from chaos. The two are perfect opposites.

The theory of the atheist then becomes that order arose from this chaos to take on its current form as the universe. The atheist attributes this rising of order to a random chain of events that resulted in a temporary form of order that remains forever unstable and will once again, at some future time, return to its origin as sheer chaos. The theist may contend that it would be impossible for order to arise out of random



chance, and that some ordering force is needed to bring order to the chaos. The atheist may then respond that, given infinite time and infinite opportunities, chaos will, through randomness and of necessity, produce all possible results that can arise. Therefore, one must consider the possibility that the chaos may exist for all eternity and that during this eternity the chaos takes on an infinite number of forms. Each of these forms is temporary and eventually recedes back into the disorder from which it arose. Perhaps an infinite number of universes have been spawned from the chaos. Our universe is perhaps a manifestation of such a stasis. Why then is our universe capable of sustaining life? If it were not, we would not be present to ask such questions. Chance has fallen in favor of life as we know it.

This theory proposed by an atheist may seem outlandish and ridiculous to a theist. Nonetheless, it would be impossible for a theist to refute such an argument. Therefore, based on human experience and reason, this argument must hold as much validity as that of the argument for creation by design or any other that is theistic in nature. Hume's belief that atheists must attribute the universe to some ordering principle, therefore, can not be upheld and must be accepted as opinion at best.

Another presupposition that Hume makes unintentionally, and which is for all intents and purposes unavoidable in the empiricist philosophical structure, is that the only basis for true knowledge is experience. One is posed with several irrefutable obstacles when adopting this philosophical framework. One thing that must be taken into consideration is the foundation of human reason. Perhaps the foundation of human reason is not found in experience, but rather in something beyond the occurrences of the material world that surrounds us. This is the opinion Descartes proposed in his *Meditations on First Philosophy*. If this is so, then Hume's attempts to ground reason in experience could be leading him astray rather than closer to truth. Such a belief, much like beliefs surrounding the existence of God, can never be vindicated, and must accordingly be treated as a faith claim rather than factual information.

It can be seen then that no philosophical system can be claimed superior to any other. As a result, each person must choose where his or her faith will be rooted and construct a unique belief structure upon that faith. What it comes to in the end is that it is impossible for any person to claim knowledge of anything with absolute certainty on any basis.

Through his discussion on Natural Religion, Hume has given the world yet another perspective to be read, studied, and contemplated. The power with which he presents his arguments in the dialogues is superlative indeed, and his claims cannot be easily overturned. By remaining neutral to the situation and refusing to state personal beliefs, Hume has only confounded the mystery. Nonetheless, this decision is a wise one indeed, for Hume's intention clearly was not to promote one view over another. The purpose of the dialogues can be seen to be the claiming of many beliefs as equal to one another. It is only through intense scrutiny and skepticism that one is able to find the unique truths that he or she seeks. God is a concept that will forever be shrouded in mystery. Regardless of views that have passed and views that will come, Hume's dialogue will always remain a brilliant philosophical presentation.

## Notes

1 Hume, David. *Dialogues Concerning Natural Religion*. Second Edition. Ed. Richard H Popkin. Indiannapolis: Hackett Publishing Co: 1998, 15.

2 *Ibid.*

3 *Ibid.*, 63.

4 *Ibid.*, 75.

5 *Ibid.*, 54.

6 *Ibid.*

7 *Ibid.*, 55.

8 *Ibid.*, 56.

9 *Ibid.*, 81.

10 *Ibid.*

11 *Ibid.*, 84.

12 *Ibid.*, 89.

13 *Ibid.*, 80.

## Philosophy and Law

### George Cheatham

One of the great divisions in legal theory is that between proponents of natural law and proponents of legal positivism. Briefly, proponents of natural law hold that law should reflect what is morally right. Positivists, on the other hand, hold that law is law and that while there is an absolute moral imperative to obey it the law itself has no necessary connection with morality. Both of these views have been argued persuasively by intelligent legal thinkers and each side has offered arguments containing both strong points and problematic areas.

One of the most prominent proponents of natural law has been St. Thomas Aquinas, on whose account law is given two natural bases. Aquinas draws largely from Aristotelian teleological concerns in defining law, saying, "it is by law that man is directed how to perform his proper acts in view of his last end."<sup>1</sup> Thus, the law is to help citizens achieve self-realization. However, Aquinas does not make his plea for natural law on Aristotelian grounds alone. Aquinas is also a distinctly Christian thinker. Thus, law is given a second natural base, not only helping citizens achieve self-realization but also making provisions for the enforcement of the divine law.

While acknowledging that not all the laws of God could possibly be enforced by secular authorities, Aquinas believes that law receives its legitimacy largely from partaking in the divine law. Aquinas posits, "all laws, in so far as they partake of right reason, are derived from the eternal law."<sup>2</sup> Thus, the law of God consists not only in the statutes of the Bible but also in the dictates of reason. Though Aquinas does not explain this point in detail, the most probable explanation would be that God gave human beings reason so as to best order their affairs. Aquinas quotes St. Augustine in support of this point as saying, "in temporal law there is nothing just and lawful but what man has drawn from the eternal law."<sup>3</sup>

This idea of right reason allows Aquinas to argue that human law is connected to morality and is not simply an arbitrary set of social rules. Genuine laws are, in his view, created according to the dictates of reason. Thus he says, "Human law has the nature of law in so far as it partakes of right reason."<sup>4</sup> However, he acknowledges that not all actual laws are based on reason. Aquinas holds that "even an unjust law, in so far as it retains some appearance of law, through being framed by one who is in power, is derived from the eternal law; for all power is from the Lord God."<sup>5</sup> Aquinas supports this assertion with scriptural justification, "Let every soul be subject unto the higher power. For there is no power but of God; the powers that be are ordained of God."<sup>6</sup>

The opposing view is that of legal positivism. Positivism holds that whatever is law is law and has no necessary connection with what should be. Positivists believe that all citizens have a moral duty to obey the law simply because it is law. They hold that failure to do so would erode the basis of ordered society. In other words, law is a factually, historically, and socially real thing that can be studied without any reference to moral standards. This does not relieve citizens of a moral obligation to obey

laws, since law is the bulwark of a well-ordered society. Positivism does not necessarily hold that law and morality are completely unconnected. It merely holds that there is no necessary connection between the two. Most positivists will freely admit that laws are often made because they are what people feel is right.

In conclusion, there are two basic approaches for dealing with the authority of law. One is the natural law approach that claims morality as the source of law. The other is the positivist approach that holds there is no necessary connection between law and morality.

### Notes

1 Aquinas, Thomas. *Summa Theologica*. Readings in the Philosophy of Law. Ed. John Arthur and William H. Shaw. Upper Saddle River: Prentice Hall: 2001, 114.

2 *Ibid.*, 115.

3 *Ibid.*

4 *Ibid.*

5 *Ibid.*

6 Romans 13:1 *Holy Bible: Containing the Old and New Testaments (King James Version)*. Uhrichsville: Barbour Publishing, Inc: 1611.

# **A Short Guide to Marx's Theory of Alienation**

**(with contemporary example)**

**Timothy Appel**

In the essay "Estranged Labor," Karl Marx writes, "Conscious life activity distinguishes man immediately from animal life activity."<sup>1</sup> This consciousness is one's ability to choose his/her actions with the means to employ them towards an end, not just towards a necessity. Therefore, according to Marx, the mark of the human species is the freedom of human activity and the ability to creatively act upon all that is nonhuman. However, it is also Marx's belief that in a capitalist society, the work most humans participate in may appear to be a willful act, but in fact, this work separates or alienates people from their possible glory. To illustrate this point I will use Marx's theory of estranged labor to as a guide to examine the following subject: a Dallas Cowboys cheerleader.<sup>2</sup>

Marx states that there are two components to estranged labor. The first is the result or product of the labor. In a capitalist system the end result of one's labor is not a product for the laborer him/herself, but a product that is to be sold primarily as a means of obtaining subsistence. This process is the objectification of labor; the product now exists as an object, a quasi-entity, alien to and outside the self of the laborer.<sup>3</sup> Since the laborer must continue to create products in order to survive, the object of his labor gains a command over the laborer: the laborer's free will is bonded to the alien object. Marx states, "the more the worker spends himself, the more powerful becomes the alien world of objects which he creates over and against himself, the poorer he himself--his inner world--becomes, the less belongs to him as his own."<sup>4</sup> That is, the laborer lives less for him/herself and more for producing and perfecting the objects of his/her labor.

The second component of the theory of estranged labor is the act of production. Marx argues that acting to produce objects in the capitalist market "is not voluntary, but coerced; it is forced labor."<sup>5</sup> Again, the labor is done only to obtain money for subsistence, and thus it is no true form of human expression. He writes, "labor is external to the worker, i.e., it does not belong to his essential being, that in his work, therefore, he does not affirm himself but denies himself...does not develop freely his physical and mental energy but mortifies his body and ruins his mind."<sup>6</sup> Hence, this labor is estranged from man because it is not labor he/she would willingly choose to conduct nor needs to conduct for his/her personal development.

Indeed, the two components of estranged labor can be found in the job of a Dallas Cowboys cheerleader. The end product of a professional cheerleader is crowd motivation, with the related product of physical appearance. Crowd motivation and the very specific standards of a cheerleader's physical appearance are unlikely things a woman would want for herself. Rather, the ends of her labor must meet the expectations of her employers, the owners of the Dallas Cowboys, and the crowd. She can not cheer how she would like to because her idea may differ from what her employers and the crowd would like it to be. Likewise, she must take on a physical appear-

ance that meets the demands of these parties. Thus, the object of her labor is alien to her. Accordingly, the labor that a Dallas Cowboys cheerleader must undertake to produce her end product is alienating to her personal being. She must train, practice and engage in extensive cosmetic up-keep--all far beyond what any person would conduct in their everyday life--in order to produce the end product. Her labor is therefore estranged from her.

As one can see, the labor of a Dallas Cowboys cheerleader gives no chance to express or develop oneself and its end is only to provide physical subsistence. As Marx would say, a woman in this profession is conducting labor that is alien to her own being and desires and it is therefore dehumanizing her.<sup>7</sup>

## Notes

1 Marx, Karl. "Estranged Labor," *The Economic & Philosophic Manuscripts of 1844*. Tr. by Martin Milligan. New York: International Publishers Co: 1964, 113.

2 In regards to the chosen subject, a Dallas Cowboys cheerleader, it was the occupation assigned for examination—they were 'in vogue' at the time.

3 Marx specifically addresses the implications of one using materials from the world—materials that could otherwise have been used by the laborer for their own purposes--to creating an actual physical product, an object. However, I believe the second point of objectification, where the laborer becomes a slave to his/her product, is the more general and more important point. Based on that premise, it is acceptable to interpret objectification as the creation of a 'quasi-entity,' facilitating the examination of labor in a service industry.

4 Marx, Karl. "Estranged Labor," *The Economic & Philosophic Manuscripts of 1844*. Tr. by Martin Milligan. New York: International Publishers Co: 1964, 108.

5 *Ibid.*, 110-111.

6 *Ibid.*, 110

7 Noteworthy comment from this essay's grader: "Yeah, but they say they like it anyway."

## Descartes' Radical Doubt: Why Descartes' Radical Doubt Needs His Scientific Method RJ Donovan

Contrary to the opinion of Bertrand Russell, Descartes' method is not that of radical doubt but is rather that of the scientific method as outlined in the *Discourse on Method*. However, if the method is truly what Descartes as a philosopher espouses, then why does he delve into the process of radical doubt at all? Is this superfluous blather, or rather is it a calculated maneuver? Descartes relies upon radical doubt because he needs it to establish a world in which his scientific method is true without question.

In order to show this, first we must look at the scientific method and that which accompanies it, namely analytic geometry and Cartesian physics. This will be accompanied by a brief look into Descartes' motivations as a scientist and as a philosopher/metaphysician. A careful examination of radical doubt will follow, showing what is lost and what is gained by such a method. This examination will lead directly to why Descartes needs radical doubt. Finally, the implications of radical doubt will be discussed, both in terms of his effects on philosophy and on society in general.

In part II of the *Discourse on Method*, Descartes outlines a new scientific method with which he says he has made tremendous progress. He has done so to embrace "the advantages of [logic, algebra, and geometry] ... yet [remaining] free of their defects."<sup>1</sup> This revolution comes about largely in reaction to the schooling in Aristotelian philosophy that he received at the hands of the Jesuits. Descartes had been told that he would find knowledge and certainty in his schooling, but after his entrance he found himself only more confused and disillusioned than ever; he had found no certainty, only ever-increasing doubts. So Descartes left school, and traveled the world, learning about different people and different customs. This only further complicated his search for truth. Eventually, he lunged for clarity and decided to call all his former beliefs and opinions into doubt, holding on only to certain guiding principles and certain moral maxims that he knew would not fail him in. He had great success in applying these principles to algebra and geometry, thus inventing analytic geometry. From this follows the scientific method, which is a systematic approach of posing hypothesis, doubting them, isolating variables, and breaking down problems into their most basic components, all with the goal of finding truth. And because he is always seeks truth, Descartes establishes the method of radical doubt. He builds truth from the ground up, by accepting nothing until it is proven true.

The first stage of radical doubt is relatively simple—even if everything else is thrown into question, and we doubt everything, we cannot doubt that we are doubting. Hence, "I think, therefore I am."<sup>2</sup> The second stage, however, is crucial. Descartes asks if perhaps he is dreaming—that is, if everything he thinks he is experiencing is a figment of his imagination. However, even in dreams, "two plus three makes five, and a square does not have more than four sides. It does not seem



possible that such obvious truths should be subject to the suspicion of being false.”<sup>33</sup> Thus Descartes concludes that although he can doubt composite things, he cannot doubt the simple and universal parts from which they are constructed like shape, quantity, size, time, etc. While one can doubt studies based on composite things, like medicine, astronomy, or physics, one cannot doubt studies based on simple things, like arithmetic and geometry or those that can be expressed mathematically and quantifiably.

Finally, in the third stage of radical doubt, Descartes confronts the idea that God, in whatever shape or form it inhabits, is actually an “evil genius” whose entire function is to deceive and trick. Could this evil god not deceive people into thinking that their sensory experiences were real when they were actually total illusions or dreams? Descartes comes to the conclusion that even simple things can be doubted. Concluding here would mean that nothing in the world could ever be proven completely, making a mockery of science and mathematics.

So, this process of radical doubt is outlined in the first meditation, and if read alone, the conclusions reached are cut and dry. Meditations two and three talk about God, and build up to the beginning section of meditation four. The fourth meditation though, changes radical doubt completely. In the fourth meditation, Descartes concludes, “that it is impossible for God ever to deceive me, for trickery or deception is always indicative of some imperfection.”<sup>34</sup> This statement changes everything! Because God can no longer deceive, and is no longer the evil genius, the third stage of radical doubt is irrelevant. The last stage of radical doubt is effectively thrown away, allowing us only as far as the second stage. Descartes begins by doubting everything. He then establishes that we can doubt everything except ourselves as thinking beings. Next he establishes that we can doubt everything except that which is mathematical. Finally, he establishes that we could doubt everything if God were an evil genius but, God is not, so we cannot doubt everything.

It should now be apparent why Descartes needs the process of radical doubt. In the language of Thomas Kuhn, Descartes is causing a “paradigm shift.”<sup>35</sup> He is essentially causing a radical change in the worldview of his time. The old paradigm/worldview was that of Aristotle and Aristotelian scholasticism. Science, in this older worldview, is a matter of taking the immediate evidence of sensory experience and deducing certain conclusions from it. The sensory experience is indubitable, and the deductions are logical, so all scientific knowledge is based on absolute certainty. Descartes’ re-conception of the mind shakes the foundations of Aristotelian scholasticism. If sensory experience is no longer self-evident, then we can no longer deduce scientific truths from these observations, making the methods of the previous 2,000 years unacceptable. Consequently, the modes of science and philosophy of the ancient world are left behind, creating the modern era. Another way of expressing this is to say that the doctrine of final causality, embraced by Aristotelian scholasticism and the Christian church, has been discarded in favor the efficient cause. This is because there is no room for final causality in the math and physics that Descartes founds. And when the world has been reduced to only mathematical components, the scientific method becomes the essential tool in the quest for mathematical, scientific, and absolute certainty. The process of radical doubt ensures that the process of the



scientific method is completely valid.

The scientific paradigm that we have today owes a great deal to Descartes. Today, we have taken Descartes' method further than he ever did. In contemporary sciences we conclude that we can never have absolute certainty in—even by observing something, says the Heisenberg uncertainty principle, we alter what is observed. All we can hope for are sound theories that are supported by careful observations.

Descartes himself does not reach this conclusion; he wanted to reach certainty and find it absolutely. His search for certainty, beginning with the famous line "I think, therefore I am," has largely defined the course of a great deal of philosophy since his time. We can debate whether Descartes is right in having found certainty in this claim, and we can debate what kind of knowledge this is, but it seems clear that it is not a kind of knowledge that is applicable to science as a whole. In finding this certainty, Descartes hopes to rebuild science in the Aristotelian method of deduction from certain first principles.

In conclusion, we can say that Descartes writes with the hope of changing the way people view the world. He creates the process of radical doubt not as an end in itself. Rather, radical doubt is a means with which to establish the paradigm of the world as quantifiable, thus paving the way for the scientific method. The scientific method is the tool used to find truth and certainty. It is this method that ultimately allows us to tame sciences like medicine and to render us "masters and possessors of nature". In reading the *Meditations* without reading the *Discourse on Method*, any student of philosophy is doomed to finding only misunderstandings and misrepresentations in the doctrine of Radical Doubt.

## Notes

1 Descartes, Rene. *Discourse on Method*. Tr. by Donald A. Cress. Indianapolis: Hackett Publishing Co.: 1998, Part II, paragraph 18.

2 *Ibid.*, Part IV, paragraph 32.

3 Descartes, Rene. *Meditations on First Philosophy*. Tr. by Donald A. Cress. Indianapolis: Hackett Publishing Co.: 1998, Med. 1, Sec. 20.

4 *Ibid.*, Part IV, Sec. 53

5 Kuhn, Thomas S. *The Structure of Scientific Revolutions*. Third Ed. Chicago: University of Chicago Press: 1996.

# The New Philosophy of Science

Joseph Cioni

In his seminal work titled *Perception, Theory and Commitment: The New Philosophy of Science*, author Harold Brown is highly critical of the logical empiricists philosophy of science, which was so dominant in the twentieth century. In order to explore Brown's "new image of science," it is first necessary to enumerate three key stances that the logical empiricists take, as well as examine various flaws that Brown believes are inherent in them. After this is accomplished, Brown's own philosophy of science will be unveiled. My own analysis of Brown's theory will be interwoven with my presentation of its essential components. At the conclusion of this paper, it should be clear to the reader that Brown's philosophy of science is indeed superior to that of the logical empiricists.

Three crucial beliefs maintained by the logical empiricists are summed up nicely by A.F. Chalmers in his book *What is this thing called science?* Chalmers writes:

If observation of the world is carried out in a careful, unprejudiced way, then the facts established in this way will constitute a secure, objective basis for science. If, further, the reasoning that takes us from this factual basis to the laws and theories that constitute scientific knowledge is sound, then the resulting knowledge can itself be taken to be securely established and objective.<sup>1</sup>

This argument assumes, first of all, not only that unbiased observations are possible, but also that unbiased and scrupulous observations can provide individuals with unambiguously clear images of reality that are independent of theory. Secondly, it professes that, because these pure images are the substance out of which facts are derived, the facts themselves must be both objective and incorrigible. Since scientific knowledge is composed of theories and laws, and theories and laws arise out of facts, as long as one makes legitimate inferences from fact to theory, scientific knowledge itself will be "securely established and objective."<sup>2</sup> A third belief encapsulated in the above argument, although it is more subtle than the other two, is that, since theories derive from facts, there is a clear separation between the two and the latter provides the foundation for the former.

These conceptions, of what scientific knowledge is, and of how one arrives at it, are completely unacceptable to Brown. One of the first ways Brown challenges the logical empiricist view is by trying to discover the sort of function that perception has in relation to our knowledge. Are one's perceptions and observations alone the source for obtaining pure facts?<sup>3</sup>

To answer this question, Brown notes that just looking at things will not provide any useful information about them. If one is to attain any meaningful information from something, one must see it "as something" - for it must first be recognized. According to Brown, for one to be able to recognize something, one must originally possess some of the relevant body or bodies of knowledge.<sup>4</sup> For example, if one was

not familiar with Chinese language and opened a book written entirely in Chinese, one would of course be able to recognize that it is a book because of prior experience with books. Even if it was a simple children's book, however, this individual would not be able to recognize the Chinese characters, and would thus fail to discern even the title of the book, much less anything about its plot. What can account for the fact that a person fluent in Chinese would readily learn all about the story in the book? Both the person fluent in Chinese and the person who is not are seeing the same strokes that form the same characters, yet both are also having radically different perceptual experiences.

The answer of course lies in the fact that the two individuals have different degrees of knowledge in different areas. In addition to knowledge, one's beliefs, culture, and experiences can also shape what one perceives. This is why Brown maintains that "...my knowledge of the activity I am engaged in is epistemologically more fundamental than the data I observe, in that the demands of this activity determine what data I pay attention to and what data are ignored as meaningless."<sup>5</sup> Perception, in which knowledge and beliefs predominantly regulate what one perceives, is said to be, depending upon the situation, either theory-laden or concept-laden.<sup>6</sup>

To help elucidate this idea, Brown refers to instances of seeing objects or events "as something," for the sake of gaining information, as instances of significant perception. Moreover, items of significant perception are, for Brown, meanings. This is why different people can extract different meanings from any item of significant perception, precisely because perception is filtered by one's subjective experiences. The relevant body of information one possesses acts as a lens through which one identifies items and then derives information from them. The same holds when one recognizes facts about an object or an event, cases where one "sees that" something is the way that it is.<sup>7</sup> To refer to my example of the two individuals looking at the Chinese children's book, only the individual literate in Chinese would be able to see that it is a children's book with a certain storyline and characters. The illiterate person would probably see that it is a book, but that would be the extent of that person's knowledge entering into the situation, and therefore the extent of information elicited from it.

The strength of Brown's argument against the empiricists' claim that observations and observation statements are free from theory, and that they provide the foundation for obtaining facts, comes out fully when it is applied to scientific observation. Brown rightly points out that a scientist does not observe every single detail around him, but only those details that are pertinent to what he is studying. If one was studying gravity, one would not observe fish or religious ceremonies, but only those events thought to be relevant to one's experiments. Moreover, and perhaps more revealing, consider what sort of explanation an empiricist would give when a scientist recognizes an observation to be problematic. Brown declares that "he is clearly observing its meaning in terms of the theories he holds, for if he had no beliefs about what ought to occur... no occurrence could be perceived as being problematic."<sup>8</sup>

As an illustration of this, consider that the retrograde motion of the planets was not perceived to be problematic until Plato introduced the theory that the motions in

the heavens are perfectly circular.<sup>9</sup> Retrograde motion was only considered a problem because the theory that guided the observations was not in accordance with what was being observed. To suggest that the observations of retrograde motion taken by themselves were determined to be anomalous would seem to be incomprehensible. A natural question to ask is: "With reference to what are the observations of retrograde motion alleged to be problematic?" A possible answer one might provide to this question - and remain consistent - would be that the observations themselves are problematic with reference to nothing. In order for something to be problematic, however, there has to be a desired or postulated outcome that one is expecting, and this anticipated outcome is a product of a theory. Without this expectation, an observation could not rightly be said to be problematic because it has to be problematic relative to something that was previously accepted or expected.

Perhaps the "fatal blow" to the empiricists' claim that unbiased and uninterpreted observations are predominantly the source of facts occurs when Brown notes that observations of this sort must be completely devoid of meaning (which comes from theories). Without meaning, however, it would be impossible to recognize something. Or, in Brown's words, "...the pure observable must itself be an unrecognized object; it cannot even be an object which is recognized as being unfamiliar."<sup>10</sup> Clearly this is not how scientific research is performed, nor is it how theories and facts are accumulated, because nothing would ever be able to be recognized!

The logical empiricists also maintain that the criterion for accepting or rejecting a proposed law or theory is how well it accords with the observed data.<sup>11</sup> If a theory is proposed and it is incompatible with the observed data, one must jettison this theory and develop another one that fits better with the observations. This is the system that the empiricists subscribe to because they believe that there are independent observation statements that are isolated from theory and are universally true. But is this truly the method for scientific research?

Brown emphatically denies that this is the actual way that scientific research is conducted. One of the ways Brown undermines this conception is by probing different historical situations in which an anomaly was deemed to be a research problem at one time and then at another time determined to be a counter-instance of a given theory. He provides a cogent example. When, in the early 1800's, the orbit of Uranus was observed not to coincide with Newtonian calculations, it was viewed as a research problem that needed to be explained within the Newtonian framework. The only acceptable variable that could be considered to "affect the orbit of a planet" was "the existence of an as yet unknown planet exerting a gravitational force."<sup>12</sup> When Neptune was actually discovered, this was thought to greatly enhance the validity of Newtonian mechanics.<sup>13</sup> Similarly, when this same discrepancy between Newtonian theory and observations was found with the orbit of Mercury, it was once again taken to be a research problem and it was again theorized that there was an unknown planet influencing Mercury's orbit. This time though, not only was this planet never found, but Newtonian mechanics never did successfully explain the irregular orbit of Mercury.<sup>14</sup> The theory of relativity eventually did account for Mercury's orbit, and once it dethroned Newtonian physics, Mercury's orbit was suddenly viewed as a counter-instance of the Newtonian system.<sup>15</sup>

Compared to the logical empiricists' notion of scientific research, this example is quite illuminating. If observations are the basis through which theories are formed, why was there only one possible solution to the irregular orbits of those two planets? If the only criteria one has to justify a theory are observations, it appears that there could be an infinite number of causes of the anomalous orbits. Additionally, how could the anomaly of Mercury's orbit change the meaning of the empiricists' objective facts at different times? If theories are isolated from and preceded by pure facts, how could a change in theory alter the connotations of these facts?

Brown believes that the more accurate way of looking at scientific research is to begin by first looking at the accepted fundamental theory during any time period. It is this theory, not observations, which determines the meaning of observed events as well as indicates "which observations are relevant... which of the relevant ones pose problems, how the problems are to be attacked, and what counts as an adequate solution to the problem."<sup>16</sup> To return to the example of the orbit of Mercury, Brown argues that it was originally viewed as a research problem because the observation was looked at through a Newtonian lens.<sup>17</sup> Since different experimental practices and scientists repeatedly failed to explain the irregularities of the orbit, the anomaly became more serious and threatening to Newtonian physics. The shift from Newtonian theory to relativity theory explains why the mismatch between theory and independent reality can be viewed as a research problem in one context - and a counter-instance in another: namely, that relativity theory better accounts for the observed phenomena.<sup>18</sup>

Brown borrows the term *paradigmatic presuppositions* from Thomas Kuhn to help explain this surprising concept. Brown defines them as "...propositions which are accepted as a result of scientific experience but which come to have a constitutive role in the structure of scientific thought."<sup>19</sup> The fascinating point is that these paradigmatic presuppositions shape one's sensory experience as well as the world that one is studying, but they are far from being universal or objective. Consequently, successive failures to account for an anomaly under one set of paradigmatic presuppositions can induce one to manipulate the presuppositions themselves. This series of events is, for Brown, the precursor to a scientific revolution.<sup>20</sup>

What exactly occurs during a scientific revolution? Brown believes that they involve transformations in the fundamental presuppositions and scientific concepts of a theory. Unlike the empiricists who believe that, at best, philosophical presuppositions play a marginal role in the development of theories and concepts, Brown likens scientific concepts to knots in a web that are intricately connected by strands that symbolize scientific propositions.<sup>21</sup> To continue with this metaphor, the perceived meaning of a concept is dictated by where it is located in the web. Subsequently, the meaning of a concept is basically a dance between the concept, its philosophical presuppositions, and the network of scientific propositions.<sup>22</sup>

When a scientific revolution does occur, the web that is superseded is not completely obliterated, so that a new web emerges composed of entirely novel features. Rather, as Brown asserts, "some of the strands which come into a particular knot are removed, others are redirected, and some new strands are introduced."<sup>23</sup> In other words, old scientific theories are renovated, as opposed to being completely razed



and rebuilt. After all, the decision to adopt a new scientific theory would involve the use of standards that are common to both theories in order to demonstrate why it is a better candidate for accounting for a given phenomenon. I entirely agree with Brown that the basis for choosing between rival theories depends not only on how well a given theory explains the body of phenomena being studied, but also on the degree to which a newly accepted theory eliminates and thus accounts for anomalies related to a rival theory. Otherwise, I believe it would be impossible to assess whether a new theory is superior to a present one. These kinds of judgments have been made throughout the history of science, so it is safe to presume that Brown is correct.

The entire process of scientific change involves discoveries, and this process is embodied in what Brown calls dialectical change. One must first be aware of the fact that in order for something to be categorized as a discovery, it has to meet the requirements of the research situation. The logical empiricists incorrectly declare that there is a clear division between the context of a discovery and its justification in that the latter involves standards that are logically sound.<sup>24</sup> Brown resolutely denies this belief as he contends that the context of discovery is intimately related with the set of justifications that are made to support it. A discovery usually comes about by adjusting one or more presuppositions, which, in turn, transforms the range of acceptable solutions.<sup>25</sup> I think it would be an amazing coincidence that the context of a discovery was completely isolated from its set of justifications. Although there is not a strict mechanical set of rules that can yield a fruitful discovery, there is an intelligible pattern that guides the scientist trying to solve the problems. This pattern can be described because, as mentioned before, scientists, regardless of how revolutionary their theory is, necessarily appeal to the current accepted theory. That is to say that Newton would have been unable to develop his laws without being intimately aware of the findings of Kepler, Galileo, and Copernicus.

To return to Brown's concept of dialectical logic, Brown characterizes it as a "conceptual framework which will allow us to clarify the relation between new scientific discoveries and the existing body of scientific knowledge and problems in the context of which these discoveries were made..."<sup>26</sup> The primary strength of dialectical logic is that it both examines the scientific research performed from the point of view of the researcher and studies the development of and relationship between successive theories.<sup>27</sup> Thus, it makes sense of the history of science. Whereas deductive logic is concerned with form, dialectical logic is concerned with the content and the context of a theory. New discoveries and theories are both dialectical since there is a discernible continuity with that which precedes them, and is made possible by anomalies. They additionally both eventuate a change in the meanings of the research processes they helped create. I believe that the cohesiveness Brown cites between theories is unquestionably more viable than the logical empiricist theory explaining the history of science, because the practice of science suggests that we should give up the quest for eternal standards and to instead examine the shared standards in a given situation. How else would one attempt to comprehend a system where, at different points in history, scientists have held contradictory standards?

It is necessary to reiterate the critical point that, under different theories, one's

presuppositions and observations will have different meanings. This is certainly not compatible with the ideal of knowledge being infallible. Since nature is always changing, the best that human beings can do is to have an opinion about natural occurrences that is anchored by previous knowledge and thorough research. Brown candidly admits that “scientific knowledge in any era is what scientists actively take as such, and the scientific knowledge of one era may be rejected as an error in the next.”<sup>28</sup> He further points out that even the rejection itself of a formerly accepted claim is shaped by views that are inherently prone to being unreliable. If scientific knowledge is merely a fallible body of accepted provisional truths, what expectations should one have about what science can do and what are the requisite steps for determining this?

In response to the latter half of that question, if one agrees that definitive rules cannot make a scientific claim more reasonable, then Brown feels that the best course of action is to the individual of practical wisdom for this aim.<sup>29</sup> Under the guidance of experience and prior knowledge, this individual should submit a candidate theory that ameliorates the unresolved problems of the previous theory, and still incorporates many of the prior theory’s results. A theory that is founded properly is one that is inter-subjectively supported by the scientific community.<sup>30</sup> Although this might leave a sour taste in the mouth of the empiricist, it does follow from the arguments given. Brown is not suggesting that, just because scientific knowledge is uninterpreted in terms of well-supported opinion, no opinion can be qualitatively better than another. What he is professing is that we do not need universal standards to develop scientific theories. As with any discipline, science needs knowledgeable and circumspect individuals who are willing to make their findings more secure by offering them for investigation by others in the same discipline. To declare that science has established universal standards is merely a convenient fabrication that proves to be spurious under close inspection. This process of seeking a consensus among other scientists also coincides with the earlier notion of theory and concept laden perception, in that the individual who possesses more scientific knowledge will be able to extract more valuable meanings from a given observation.

In one sense, Brown’s definitions of scientific truth and knowledge could be humbling and perhaps even devastating to the romantic scientist whose discoveries were once thought to be ornaments on a timeless, universal, and infallible tree of knowledge. Brown’s biggest impact on the scientific community could very well be psychological, the exorcising of a misleading demon that has plagued the philosophy of science. Just because one’s theory might not be eternally and immutably true, does not strip it of its importance or usefulness. Scientific discoveries have left, and will continue to leave, indelible marks on the world. Brown is simply providing us with a better understanding of how these marks are left and of what they consist.

Alas, one cannot help empathizing with the logical empiricists. There is something invigorating and comforting in the belief that the unbiased execution of the senses yields pure facts about the natural world. Yet, contrary to what our senses might suggest, the Earth is currently not conceived as being in the center of the universe, and time is not estimated to be completely separate from space. Nor, as Brown magnificently demonstrates, can the views of the logical empiricists withstand

scrutiny. It appears to me, though, that a true scientist would be elated by the conclusions in Brown's philosophy of science. For Perception, Theory and Commitment seems to be a profound step in focusing scientists' attention in the right direction.

### Notes

1 Chalmers, A.F. *What Is This Thing Called Science?* Queensland: University of Queensland Press: 1999, 1

2 *Ibid.*

3 Brown, Harold I. *Perception, Theory and Commitment: The New Philosophy of Science*. Chicago: University of Chicago Press: 1977, 81.

4 *Ibid.*, 82-85.

5 *Ibid.*, 90.

6 *Ibid.*, 83.

7 *Ibid.*, 85-87.

8 *Ibid.*, 90.

9 *Ibid.*, 99.

10 *Ibid.*, 89.

11 *Ibid.*, 97.

12 *Ibid.*

13 *Ibid.*

14 *Ibid.*

15 *Ibid.*

16 *Ibid.*, 100.

17 *Ibid.*, 97.

18 *Ibid.*

19 *Ibid.*, 105.

20 *Ibid.*, 109.

21 *Ibid.*, 120.

22 *Ibid.*

23 *Ibid.*

24 *Ibid.*, 130.

25 *Ibid.*, 132.

26 *Ibid.*

27 *Ibid.*, 134.

28 *Ibid.*, 151.

29 *Ibid.*, 149.

30 *Ibid.*, 150.



## Contributors

**Jennifer Sutphin** came to WAC expecting to major in Psychology. That was before she discovered philosophy. She is now a Philosophy major who will graduate in 2005. Although she is new to the philosophy program, she has found philosophy of religion the most interesting. She wishes to thank Annie for all the support she has given during the writing and revising of "Happy Hour."

**Chris Hayden** is a sophomore majoring in Physics and Mathematics, with minors in Philosophy and Computer Science. Chris takes great interest in existentialism and the work of Nietzsche.

**Geroge Cheatham** is a sophomore from Greensboro, NC. He is a Philosophy major with a particular interest in political philosophy.

**RJ Donovan** is a junior and comes to Washington College from the small town of Dorset, Vermont. He is a double major in Philosophy and International Studies with a Hispanic Studies minor, and he has lived in Spain. His senior thesis is about the evolution of political theory into international relations reality, and he strongly recommends that everyone read Lao Tzu's *Tao Te Ching* and Gabriel Garcia Marquez's *100 Years of Solitude*.

**Joseph Cioni** is a senior Philosophy major and will begin working toward his doctorate in philosophy this fall. His current philosophical interests include: Marxism, ethics, the philosophy of race, and pretty much anything else other than ontology. Joe writes:

Dr. Newell: Thank you for teaching me the meaning of life... and for being my advisor too

Dr. Weigel: Since you have arrived at WC, you have been nothing short of a blessing to our community. Now if only I could grasp the meaning of the chestnut tree passage...

Dr. Brien: I cannot thank you enough for your time, effort, and sincerity. From the Tao to Stephen Hawking, it has been an unforgettable journey.

Dr. Anderson: As you retire, I have no doubts that you will remain in the hearts and minds of your students. You are a very special man. LONG LIVE NIETZSCHE!





Peter Abelard Mortimer J. Adler Heinrich Cornelius von Nettsheim Agrippa  
 Louis Althusser Anselm of Canterbury Timothy Appel Thomas Aquinas  
 Hannah Arendt Aristotle St. Augustine of Hippo Marcus Aurelius  
 Avicenna Alfred Jules Ayer Roger Bacon Sir Francis Bacon Gregory  
 Bateson Jean Baudrillard Simone de Beauvoir Jeremy Bentham George  
 Berkeley Isaiah Berlin Hakim Bey Boethius Pierre Bourdieu Francis  
 Herbert Bradley Giordano Bruno Martin Buber Buddha Edmund Burke  
 Albert Camus Rudolf Carnap Ernst Cassirer George Cheatham Chuang  
 Tzu Marcus Tullius Cicero Joseph Cioni Hélène Cixous Confucius Tim  
 Crane Donald Davidson Paul De Man Guy Debord Daniel C. Dennett  
 Jacques Derrida René Descartes John Dewey Wilhelm Dilthey Diogenes  
 of Sinope RJ Donovan Will Durant Ostad Elahi Mircea Eliade Frederick  
 Engels Epictetus Epicurus Desiderius Erasmus Frantz Fanon Ludwig  
 Feuerbach Johann Gottlieb Fichte Michel Foucault Gottlob Frege Sarah  
 Margaret Fuller Hans-Georg Gadamer Mahatma Gandhi Ernest Gellner  
 Baltasar Gracian Michael Grosso George Gurdjieff Jürgen Habermas  
 Donna Haraway Chris Hayden Georg Wilhelm Friedrich Hegel Martin  
 Heidegger Carl Gustav Hempel Heraclitus Thomas Hobbes Eric Hoffer  
 Ted Honderich David Hume Edmund Husserl Hypatia of Alexandria  
 Héloïse Ivan Illich Fredric Jameson Karl Jaspers Immanuel Kant Søren  
 Kierkegaard Saul Kripke U.G. Krishnamurti Thomas Kuhn Lao Tzu Henri  
 Lefebvre Gottfried Willhelm Leibniz Emmanuel Levinas John Locke  
 Bernard Lonergan Georg Lukács Jean-Francois Lyotard Nicolo  
 Machiavelli Ruth Barcan Marcus Herbert Marcuse Karl Marx Maurice  
 Merleau-Ponty John Stuart Mill Michel de Montaigne G.E. Moore Sir  
 Thomas More Leonard Nelson Friedrich Nietzsche Albert Jay Nock  
 Robert Nozick Richard E. Palmer Blaise Pascal Charles Sanders Peirce  
 Adrian Piper Plato Plotinus Karl Popper Porphyry Mark Poster Proclus  
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 Arthur Schopenhauer Albert Schweitzer John Duns Scotus Roger Scruton  
 John R. Searle Baron de Montesquieu Charles-Louis de Secondat Wilfrid  
 Sellars Lucius Annaeus Seneca Lev Shestov Peter Singer Adam Smith  
 Socrates Herbert Spencer Benedict Spinoza Leo Strauss Jennifer Sutphin  
 Sun Tzu Pierre Teilhard de Chardin Thales of Miletus Theophrastus Paul  
 Tillich Yamamoto Tsunetomo Bas C. van Fraassen Gianni Vattimo  
 Cornelis Verhoeven Eric Voegelin Voltaire Simone Weil Alfred North  
 Whitehead William of Ockham Colin Wilson Ludwig Wittgenstein